EXHIBIT 17

Naval Facilities Engineering Systems Command Southwest
BRAC PMO West, San Diego, California

Final

Record of Decision for Parcel F

Hunters Point Naval Shipyard
San Francisco, California

September 2024

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Table of Contents

List of Attachments

Barajas and Associates, Battelle, Neptune & Company, and Sea Engineering, Inc. 2007. *Technical Memorandum, Hunters Point Shipyard Parcel F, Feasibility Study Data Gaps Investigation. Hunters Point Shipyard, San Francisco, CA*. May 25. (DCN: BAI-5106-0004-0001)

Barajas and Associates. 2008. *Final Feasibility Study for Parcel F, Hunters Point Shipyard, San Francisco, California*. April 30. (DCN: BAI-5106-0004-0003)

KCH. 2017a. *Final Addendum to the Feasibility Study Report for Parcel F, Hunters Point Naval Shipyard San Francisco, California*. January. (DCN: KCH-2622-0005-0138)

ECC-Insight, LLC and CDM Smith. 2017. *Final Technical Memorandum – Optimized Remedial Alternative for Parcel F, Hunters Point Naval Shipyard, San Francisco, CA*. September. (DCN: INEC-2004-0014-0004)

List of Figures

List of Tables

Acronyms and Abbreviations

ARAR	applicable or relevant and appropriate requirement
AWA	area-weighted average
BMP	best management practice
BRAC	Base Realignment and Closure
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	chemical of concern
CSM	conceptual site model
DTSC	California Department of Toxic Substances Control
EE/CA	Engineering Evaluation/Cost Analysis
EPA	United States Environmental Protection Agency
ER-M	National Oceanic and Atmospheric Administration's effects range - median
FEMA	Federal Emergency Management Agency
FFA	Federal Facility Agreement
FS	Feasibility Study
FSDGs	Feasibility Study Data Gaps
FYR	Five-Year Review
g/day	grams per day
GSR	green and sustainable remediation
HPNS	Hunters Point Naval Shipyard
IC	institutional control
IR	installation restoration
LUC RD	Land Use Control Remedial Design
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
M	million
MLLW	mean lower low water
MNR	monitored natural recovery

Navy	United States Department of the Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NGVD 29	National Geodetic Vertical Datum of 1929
NPL	National Priorities List
O&M	operation and maintenance
PCB	polychlorinated biphenyl
RG	remediation goal
RAO	remedial action objective
RCRA	Resource Conservation and Recovery Act
ROCs	radionuclides of concern
ROD	Record of Decision
RPD	redox potential discontinuity
§	Section
SLERA	screening level ecological risk assessment
USC	United States Code
Water Board	San Francisco Bay Regional Water Quality Control Board

1.0 Declaration

This Record of Decision (ROD) presents the selected remedy for Parcel F at Hunters Point Naval Shipyard (HPNS) in San Francisco, California. HPNS was placed on the National Priorities List (NPL) in 1989 (United States Environmental Protection Agency [EPA] ID: CA71170090087). The remedy was selected in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended by the Superfund Amendments and Reauthorization Act of 1986 (Title 42 United States Code [USC] Section [§] 9601, et seq.) and, to the extent practicable, the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) (Title 40 Code of Federal Regulations [CFR], Part 300). This decision is based on the Administrative Record Index for this site. The Administrative Record Index is included in the electronic version of the ROD as **Attachment 1**[1]. The United States Department of the Navy (Navy), the lead agency for site activities, and EPA, the support agency, jointly selected the remedy for Parcel F. The California Department of Toxic Substances Control (DTSC) and the San Francisco Bay Regional Water Quality Control Board (Water Board), also support agencies, concur on the remedy for Parcel F. The Navy, as the lead federal agency, provides funding under the Base Realignment and Closure (BRAC) program for site cleanups at HPNS. The Federal Facility Agreement (FFA) for HPNS documents how the Navy intends to meet and implement CERCLA in partnership with EPA, DTSC, and the Water Board.

Parcel F is one of six parcels (Parcels A through F) originally designated for environmental restoration. Parcel F is composed of 443 acres of sediments that surround HPNS in San Francisco Bay (**Figure 1**). Investigations conducted at HPNS determined that within Parcel F, only Area III (Point Avisadero), Area IX (Oil Reclamation Area), and Area X (South Basin) contained polychlorinated biphenyl (PCB) concentrations that pose unacceptable risks to human health from exposure through fish consumption, and PCBs, copper, lead, and mercury concentrations that pose potential risk to birds feeding on benthic invertebrates and fishes. This ROD addresses only Parcel F.

[1] **Bold Blue Text** identifies detailed site information available in the Administrative Record and listed in the References Table (**Attachment 2**). This ROD is also available electronically whereby bold blue text serves as a hyperlink to reference information. The excerpts referenced by the hyperlinks are part of the ROD. To the extent inconsistencies may exist between the referenced information attached to the ROD via hyperlinks and the information in the basic ROD itself, the language in the basic ROD controls.

1.1 Selected Remedy

The CERCLA remedial action selected in this ROD is necessary to protect the public health, welfare, and the environment from actual or potential releases of hazardous substances from Parcel F. The selected remedy for Parcel F addresses sediments contaminated with PCBs, copper, lead, and mercury within Areas III, IX, and X. The selected remedy consists of the following actions to address risks posed by contaminated sediments:

Area III

The selected remedy within Area III (Alternative 4/4A) is a combination remedy of focused sediment removal and capping for contaminated sediments that exceed the remediation goals (RGs) for copper, mercury, and PCBs, and institutional controls (ICs). The selection and specifications of capping material will be finalized during design of the cleanup remedy. Removed sediments will be transported for off-site disposal. Final off-site disposal locations, including re-use opportunities, will also be determined during the remedial design.

The Parcel F selected remedy for **Area III**, **Alternative 4/4A** – Focused Removal/ Backfill, Off-Site Disposal, Capping, and ICs, is described as follows:

- **Focused Removal/Backfill/Off-Site Disposal**. Focused sediment removal and backfill for sediments, where chemical of concern (COC) concentrations exceed remedial action objective (RAO) 1 RGs in the nearshore area with water depths less than 5 feet (i.e., sediments too shallow to be capped). Sediments will be removed followed by backfilling with clean sediments to pre-removal elevations. Hence, all sediments with concentrations of total PCBs above 1,240 micrograms per kilogram (µg/kg), copper above 271 milligrams per kilogram (mg/kg), and mercury above 1.87 mg/kg that are too shallow to be capped will be remediated through removal to a maximum depth of 2 feet followed by backfilling.
- **Capping**. Contaminated sediments in water depths greater than 5 feet but less than 30 feet will be capped. An estimated 68,670 square feet of contaminated sediments will be capped with approximately 2 feet of material. The cap will be designed to contain the contaminated sediments and resist erosion and will extend beyond the boundary of contaminated sediments to ensure complete coverage and to allow for a shallow slope along the edge of the cap. The dimensions of the cap and the capping material will be determined during remedial design.

- **Institutional Controls**. ICs will be implemented in Area III (see **Section 2.10.2**) to maintain the integrity of the remedy and until cleanup goals have been achieved to ensure that Site conditions remain protective of human health.

Areas IX and X

The selected remedy within Areas IX and X (Alternative 7) is a combination remedy consisting of *in situ* treatment, removal with backfill, monitored natural recovery (MNR), and ICs. It results in the removal of intertidal sediments to a target depth of 1 foot. Sediments will be cleaned up based on PCB concentration, as follows:

- Intertidal PCB concentration exceeding 1,240 µg/kg = focused removal with backfill
- Subtidal PCB concentration exceeding 12,400 µg/kg = focused removal with backfill
- Subtidal PCB concentration exceeding 1,240 µg/kg but below 12,400 µg/kg = *in situ* treatment
- PCB concentrations between 148[2] µg/kg and less than or equal to 1,240 µg/kg = MNR

The technology assignment framework (i.e., which remedial technology is planned to be employed in which grid location), was modified in this ROD to minimize impacts to the Yosemite Slough remedial action by increasing the removal area in close proximity to Yosemite Slough. This modification achieves a lower overall post-remedial action PCB area-weighted average (AWA) concentration of 193 ug/kg for Area X, thereby reducing the MNR timeframe to achieve RAOs in Area X. This modification is documented in the *Final Technical Memorandum Revision to Total PCB Background Concentration and RAO 3 RG* (ECC-Insight and CDM Smith, 2022), presented in **Attachment 5 (Part 3)**. Future adjustments to the technology assignment framework will be made during remedial design based on pre-remedial action sediment characterization data.

The Parcel F selected remedy for **Areas IX and X, Alternative 7** – Focused Removal/Backfill, *In situ* Treatment, Off-Site Disposal, MNR, and ICs, is described as follows:

- **Focused Removal/Backfill/Off-Site Disposal**. All intertidal sediments (i.e., areas with a surface elevation above 0 feet mean lower low water [MLLW],

[2]If the background PCB concentrations are found to be greater than 148 µg/kg either through long-term monitoring at Areas IX/X, a site-specific background sediment study, an updated sediment trap study, or similar study, the Navy may evaluate a higher background PCB value as part of the FYR pursuant to CERCLA §121 and the NCP.

(National Geodetic Vertical Datum of 1929 [NGVD 29] elevation -2.78 feet) with total PCB concentrations above the RAO 1 PCB cleanup level of 1,240 µg/kg will be remediated through removal to a target depth of 1 foot. Subtidal sediments (i.e., areas with a surface elevation below 0 feet MLLW [NGVD 29 elevation -2.78 feet]) with total PCB concentrations exceeding 12,400 µg/kg (10 times the RAO 1 cleanup level) will be remediated through removal to a target depth of 1 foot. In addition, all sediments with copper concentrations above the RAO 1 copper cleanup level of 271 mg/kg and mercury concentrations above the RAO 1 mercury cleanup level of 1.87 mg/kg will be remediated through removal to a target depth of 1 foot regardless of tidal zone location. Following sediment removal, the areas will be backfilled.

- ***In situ* treatment.** Subtidal sediments with total PCB concentrations exceeding the RAO 1 PCB cleanup level of 1,240 µg/kg, but less than 12,400 µg/kg (10 times the RAO 1 cleanup level), will be treated using carbon-based amendments.
- **MNR.** Surface sediments within Areas IX and X with PCB concentrations below the RAO 1 PCB cleanup level of 1,240 µg/kg will be remediated through MNR.
- **Institutional Controls**. ICs will be implemented in Areas IX and X (see **Section 2.10.2**) to maintain the integrity of the remedy and until cleanup goals have been achieved to ensure that Site conditions remain protective of human health.

Parcel F Site-wide Institutional Controls

ICs will be implemented to require proper management and disposal of any low-level radiological objects that may be encountered in sediments during future site activities. Site-wide ICs will be maintained until RAOs are achieved and all radiological concerns have been addressed.

1.2 Statutory Determinations

The selected remedy is protective of human health and the environment, complies with federal and state statutes and regulations that are applicable or relevant and appropriate to the remedy, and is cost-effective. The selected remedy uses permanent solutions and alternative treatment (or resource recovery) technologies to the maximum extent practicable. It provides the best balance of tradeoffs relative to the five balancing criteria and properly considers the two modifying criteria. The selected remedy satisfies the statutory preference for treatment as a principal element through the treatment of PCB-contaminated sediments within Areas IX and X. Statutory Five-Year Reviews (FYRs) pursuant to CERCLA § 121 and the NCP will be conducted because the remedy will leave contamination in place at Parcel F above concentrations that allow for unlimited use and unrestricted exposure.

1.3 Data Certification Checklist

The following information is included in Section 2 of this ROD. Additional information can be found in the Administrative Record file for this site:

- Site description and history (**Section 2.1**)
- Site characteristics (**Section 2.2**)
- COCs and their concentrations (**Section 2.3**)
- Current and reasonably anticipated future waterway use (**Section 2.4**)
- Baseline risk represented by COCs (**Section 2.5**)
- Basis for Response Action (**Section 2.6**)
- Principal threat wastes (**Section 2.7**)
- RGs established for COCs and the basis for these goals (**Section 2.8**)
- Description and evaluation of remedial alternatives (**Section 2.9**)
- Estimated capital, annual operation and maintenance (O&M), total present worth costs, discount rate, and the number of years over which the remedy cost estimates are projected (**Section 2.9.1**)
- Key factors that led to selecting the remedy, e.g., a description of how the selected remedy provides the best balance of tradeoffs with respect to the balancing and modifying criteria, highlighting criteria key to the decision (**Section 2.10.1**)
- Description of selected remedy (**Section 2.10.2**)
- Expected outcomes of the selected remedy (**Section 2.10.3**)

1.4 Authorizing Signatures

This signature sheet documents the Navy's and EPA's co-selection of the remedy in this ROD. This signature sheet also documents the State of California's (DTSC and Water Board) concurrence with this ROD.

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Base Realignment and Closure Environmental Coordinator
Base Realignment and Closure Program Management Office West
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9/26/2024
Date

Michael Montgomery
Director
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Date

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Branch Chief
Site Mitigation and Restoration Program – Berkeley Office
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Date

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Executive Officer
California Environmental Protection Agency
San Francisco Regional Water Quality Control Board

9/26/24
Date

area adjacent to Yosemite Slough, thereby achieving a lower post-remedial action PCB AWA concentration of 193 ug/kg for Area X.

2.10 Selected Remedy

2.10.1 Rationale for the Selected Remedy

The Navy, in consultation with EPA, DTSC, and the Water Board, selected the following remedies for Parcel F sediments:

- **Area III – Alternatives 4/4A** – Focused Removal/Backfill, Off-Site Disposal, Capping, and ICs to maintain the integrity of the remedy
- **Areas IX and X – Alternative 7** – Focused Removal/Backfill, *In situ* Treatment, Off-Site Disposal, MNR, and ICs to maintain the integrity of the remedy
- **Parcel F Site-wide ICs** – ICs will be implemented to require proper management of low-level radiological objects that may be encountered in sediments during future site activities.

The remedies were selected based on an evaluation of the remedial alternatives, as described in **Section 2.9**, relative to the nine evaluation criteria. The selected remedies comply with the two threshold criteria and provide the best balance of tradeoffs with respect to the five balancing criteria. The Navy's evaluation of the two modifying criteria did not warrant changes to the preferred alternatives published in the Proposed Plan. However, following the Proposed Plan public comment period and development of the draft and draft final ROD, a revised PCB background value was evaluated in response to a comment from the Water Board. The impact of the revised PCB background value is described in the technical memorandum (ECC-Insight and CDM Smith, 2022) included as part of **Attachment 5 (Part 3)**. EPA and the State of California, through DTSC and the Water Board, and segments of the community support Alternatives 4/4A for Area III and Alternative 7 for Areas IX and X as proposed.

The Navy has reviewed public input and consulted with the State and support agencies regarding the most appropriate remedy decision for Parcel F. During the course of finalizing the ROD for Parcel F, revisions were made to the PCB background concentration from 200 µg/kg to 148 µg/kg based on stakeholder feedback solicited consistent with NCP 300.430, which lengthens MNR recovery projections. The selected remedy for Areas IX/X yields an MNR time period for Area X that is the same as was documented in the Proposed Plan (8 years), but now includes a longer recovery time period for Area IX (13 years versus 5 years documented in the Proposed Plan). A range of uncertainty in the recovery timeframes based on sensitivity analyses (Attachment 1

within the Technical Memorandum), has also been evaluated for these projections, which is included in **Attachment 5 (Part 3)** (ECC-Insight and CDM Smith, 2022).

Per NCP 300.430(e)(1) required process steps, the costs were updated for Alternative 7, which includes a MNR component (long-term monitoring and O&M) affected by the change in the PCB background value, and are presented in **Attachment 5 (Part 3)**. The updated overall costs (net present value) for Alternative 7 presented in **Attachment 5 (Part 3),** are approximately 1.3% higher than the costs presented in the Proposed Plan. The 1.3% increase in overall costs to Alternative 7 as a result of changing the total PCB background concentration to 148 µg/kg does not represent a substantive change that would alter the outcome of the FS comparative alternative analysis. The updated costs for the selected remedy remain proportional to its overall effectiveness per NCP 300.430(f)(1)(ii)(D). Costs were not updated for alternatives not selected as there would be a similar impact to the evaluation of cost as a criterion for all alternatives with MNR as a component that would not impact the overall remedy selection. The Navy, as lead regulatory agency, has selected Alternative 7 for Areas IX and X and Alternative 4/4A for Area III per NCP 300.515(e). The change in the total PCB background concentration does not affect the selected remedy for Area III, as Alternative 4/4A does not have a MNR component.

The selected remedies are cost-effective remedies that will achieve long-term protection of human health and the environment within a reasonable time frame while minimizing short-term impacts to site workers, the community, and the environment. The selected remedies will effectively reduce site risks by removing significant amounts of COCs, safely containing or treating sediments and relying on natural recovery processes (e.g., deposition of cleaner material) while implementing a sustainable remedy that minimizes the environmental footprint, likelihood of accident or risk/injury per hour during implementation, and socioeconomic and community impacts. ICs will be used to limit exposure by humans and protect the remedy by limiting disturbance. In addition, the selected remedies will be subject to statutory reviews every 5 years, pursuant to CERCLA, to ensure that they remain protective of human health and the environment. The selected remedies include monitoring and maintenance that would be performed, as long as necessary, to protect human health and the environment. Best management practices (BMPs) and remedial approach refinements during design will be implemented to maximize the sustainable outcome of the selected remedy for Areas III, IX, and X.

The Navy will, to the maximum extent practicable, ensure that the selected remedy for Areas IX and X and the Yosemite Slough site will be compatible with respect to timing

and constructability to ensure that the cleanups are compatible and to minimize any potential for recontamination of either area.

2.10.2 Description of Selected Remedy

Cleanup activities will be designed to minimize adverse impacts to aquatic habitat and resources through the use of best management practices, equipment selection, and material selection.

Area III

The selected remedy for Area III is a combination remedy of focused sediment removal and backfill and capping for contaminated sediments that meet or exceed the RAO 1 RGs for copper, mercury, PCBs, and ICs (**Figures 8** and **10**). Characterization will be required prior to remedy construction for the purpose of refining the remedial footprint including incorporating the recommendations for refining the remedial action footprint around Wharf #2 (ECC-Insight and CDM Smith, 2018), establishing dredge volumes, assessing geotechnical characteristics and managing and disposing of contaminated sediments and any water generated during construction. The characterization activities will be performed by the remedial action contractor prior to construction at Area III, including in the vicinity of Wharf #2. The selection and specifications of backfill and capping material will be finalized during design of the cleanup remedy.

Cleanup is not required where COC concentrations do not exceed RAO 1 RGs. Contaminated sediments exceeding the RAO 1 RGs in the nearshore area too shallow to be capped (i.e., water depths less than 5 feet MLLW) will be removed followed by backfilling with clean sediments to pre-removal elevations. The sediment removal will target contamination above the site-specific RGs in the focused removal area to a maximum depth of 2 feet because backfilling would occur. The removal depths selected are based on analytical data for copper, mercury, and PCBs from the core samples collected during the 2003 FSDGs investigation (Barajas et al., 2007). The estimated removal volume is 1,790 cubic yards. Removal of sediments is expected to occur using an environmental clamshell bucket although the selection of dredging equipment will be finalized during remedial design or as part of the remedial action work plan. Because of the relatively small volume of sediments to be removed, dredging is expected to be completed in 2 to 3 days. Excavated sediments will be dewatered prior to transport for off-site disposal. Water generated during the dewatering process will be discharged into San Francisco Bay or the sanitary sewer. Water will be treated as necessary prior to discharge to meet required regulatory discharge limits. Final off-site disposal locations, including re-use opportunities, will be determined during the remedial design. Potential re-use opportunities include placement at beneficial re-use sites within the San

Francisco Bay such as Cullinan Ranch, Suisun Marsh, Montezuma Wetland, and Winter Island and the use of sediments as fill material to support California Department of Transportation infrastructure projects.

Beyond the nearshore area, contaminated sediments exceeding the RAO 1 RGs in water depths greater than 5 feet but less than 30 feet MLLW will be capped. An estimated 68,670 square feet of contaminated sediments will be capped with approximately 2 feet of material. The cap will either be an armored sand cap with a carbon amendment or an AquaBlok® cap that forms a low permeability layer to restrict groundwater-surface water interaction. The cap will be designed to contain the contaminated sediments and resist erosion and will extend beyond the boundary of contaminated sediments to ensure complete coverage and to allow for a shallow slope along the edge of the cap. Capping materials that aid active benthic organism recolonization will be preferred. The dimensions of the cap and the capping material will be determined during remedial design. Clean cap material will be transported to the site by truck or barge. The method of cap placement will be determined during remedial design.

A hydrodynamic model that considers a 100-year storm event in conjunction with sea level rise will be used to develop backfill and cap particle size requirements that resist erosion from tidal current and wave action during remedial design.

Control measures such as BMPs will be implemented during sediment removal and cap placement to minimize releases of contaminated material to the surrounding water column. Water quality monitoring will be performed to monitor chemical resuspension and turbidity.

The selected remedy will achieve the RAO RGs in Area III sediments in water depths less than 30 feet immediately after remedial construction is complete. Contaminated sediments in deeper water exceeding RAO 1 RGs will not be addressed through capping or removal due to the lack of exposure by the surf scoter, which does not forage in water depths greater than 30 feet. Although lead does not have an RG, there are only three locations, two in deeper water and one in the excavation area, with elevated concentrations of lead as compared to the ER-M screening level of 218 mg/kg based on protection of the benthic community.

The selected remedy for Area III achieves the RAOs established for the site by eliminating exposure to COCs exceeding the RAO 1 cleanup levels and by achieving the RAO 2 and RAO 3 cleanup levels for total PCBs on an AWA basis following construction of the remedy. Incorporation of additional sustainability elements such as

selection of capping material and disposal options will be considered during remedial design.

Areas IX and X

The selected remedy for Areas IX and X is a combination remedy consisting of focused sediment removal with backfill, *in situ* treatment, MNR, and ICs (**Figures 9** and **10**). Characterization will be required prior to remedy construction for the purpose of refining the remedial action footprint, establishing dredge volumes, assessing geotechnical characteristics, managing and disposing of contaminated sediments and water generated during construction as well as coordinating with the Yosemite Slough site and HPNS Parcel E and E-2 shoreline remedial activities. The selection and specifications of backfill material will be finalized during design of the cleanup remedy. Sediments will be cleaned up based on PCB concentration, as follows:

- Intertidal PCB concentration exceeding 1,240 µg/kg = focused removal with backfill
- Subtidal PCB concentration exceeding 12,400 µg/kg = focused removal with backfill
- Subtidal PCB concentration exceeding 1,240 µg/kg but below 12,400 µg/kg = *in situ* treatment
- PCB concentrations between 148[3] µg/kg and less than or equal to 1,240 µg/kg = MNR

Based on the above bullets, intertidal and subtidal sediments with total PCB concentrations above 1,240 µg/kg and 12,400 µg/kg, respectively, will be removed to a target depth of 1 foot (0 to 30 centimeters). The final removal depth will be based on ability of the backfill material to contain contamination left in place and resist erosion and will be determined during the remedial design. Subtidal sediments with total PCB concentrations ranging from 1,240 to 12,400 µg/kg will be treated *in situ* and PCB concentrations ranging from 148 to 1,240 µg/kg will be designated for MNR. The technology assignment framework (i.e., which remedial technology is planned to be employed in which grid location), was modified in this ROD to minimize the impacts to the Yosemite Slough remedial action by increasing the removal area in close proximity to Yosemite Slough. This modification achieves a lower overall post-remedial action PCB AWA concentration of 193 ug/kg for Area X, thereby reducing the MNR timeframe

[3] If the background PCB concentrations are found to be greater than 148 µg/kg either through long-term monitoring at Areas IX/X, a site-specific background sediment study, an updated sediment trap study, or similar study, the Navy may evaluate a higher background PCB value as part of the FYR pursuant to CERCLA §121 and the NCP.

to achieve RAOs in Area X. This modification is documented in the *Final Technical Memorandum Revision to Total PCB Background Concentration and RAO 3 Remediation Goal* (ECC-Insight and CDM Smith, 2022), presented in **Attachment 5 (Part 3)**. Future adjustments to the technology assignment framework will be made during remedial design based on pre-remedial action sediment characterization data.

Sediments with metal concentrations above the RAO 1 RGs (or ER-M for lead) are confined to intertidal sediments, or areas of subtidal sediment with PCB concentrations exceeding 12,400 µg/kg and are planned for removal to a depth of approximately 1 foot. Hence, copper concentrations above 271 mg/kg and mercury concentrations above 1.87 mg/kg will be remediated through removal regardless of tidal zone location. Since the distribution of lead concentrations follows the distribution of PCBs, achieving the RGs for PCBs via removal will also reduce the risks associated with lead. The target 1 foot removal depth will effectively remove contaminated sediments from the biologically active zone, and excavated areas will be backfilled with clean material to the same elevation as was removed. In addition, long-term monitoring will include performance of periodic bathymetric surveys to monitor that the surface elevation of the backfilled material remains consistent over time. The type of backfill material will be determined during remedial design. The estimated removal volume is 47,200 cubic yards. Removal of sediments is expected to occur using a barge-mounted or shoreline excavator fitted with an articulated bucket, although the selection of specific dredging equipment will be finalized during remedial design or as part of the remedial action work plan. Excavated sediments will be dewatered prior to transport for off-site disposal. Water generated during the dewatering process will be discharged into San Francisco Bay or the sanitary sewer. Water will be treated as necessary prior to discharge to meet required regulatory discharge limits. Contaminated sediments will be disposed at an off-site landfill. Re-use opportunities for removed sediments will be considered during remedial design. Potential re-use opportunities include placement at beneficial re-use sites within the San Francisco Bay such as Cullinan Ranch, Suisun Marsh, Montezuma Wetland, and Winter Island and the use of sediments as fill material to support California Department of Transportation infrastructure projects.

Control measures such as BMPs will be implemented during sediment removal and backfill placement to minimize releases of contaminated material to the surrounding water column. Water quality monitoring will be performed to monitor chemical resuspension and turbidity. The RAO RGs will be achieved immediately after remedial construction in the focused removal with backfill remediation zone in Areas IX and X.

In situ treatment will be accomplished using carbon-based amendments. *In situ* treatment will be used to treat PCBs only. Metals exceeding RAO 1 RGs are to be remediated through the removal action per the above paragraph regardless of the tidal zone location. Application of the carbon-based *in situ* treatment amendments will rely on bioturbation to mix amendments into the sediment bed. As a result, treatment will extend to the full bioturbation depth associated with benthic organisms present within Areas IX and X. Sediment profile imaging conducted during the pilot study demonstrated that mixing associated with physical processes and bioturbation resulted in complete incorporation of the treatment amendment into the native sediment 26 months after placement (KCH, 2018). *In situ* treatment amendments include direct placement and mixing of activated carbon or commercially available materials such as AquaGate®+PAC or SediMite™. The concentration of carbon amendments and placement material will be determined during remedial design and will be based on the results of the pilot study (KCH, 2018). The maximum total PCB concentration subject to treatment during the pilot study (KCH, 2018) was 1,410 µg/kg. Although this concentration is less than the maximum total PCB concentration to be treated using carbon-based amendments, bioavailability of PCBs was reduced by 90% during the pilot study. Therefore, assuming the remedial action *in situ* treatment will achieve similar results, the effective, i.e., bioavailable, PCB concentrations will be reduced by 90% in the treatment zone, e.g., from 12,400 µg/kg to 1,240 µg/kg.

This multi-component remedial strategy will result in an AWA total PCB concentration of approximately 260 µg/kg for Area IX and 193 µg/kg for Area X at the completion of construction, which is expected to take 6 months to complete. The selected remedy will rely on MNR to achieve the RAO 3 cleanup level for total PCBs as a long-term RG. Natural recovery modeling using the SEDCAM model shows that surface sediments within Areas IX and X will reach 148 µg/kg, which represents ambient sediment total PCB concentrations in San Francisco Bay (RAO 3 RG) on an AWA basis, within 13 and 8 years, respectively, through MNR. A formal monitoring plan will be developed during the remedial design phase.

Institutional Controls

The Navy will implement ICs as a component of the selected remedy in Areas III, IX, and X to manage the site-wide potential of low-level radiological objects in Parcel F sediments (**Figure 10**). ICs for Parcel F will entail legal and administrative requirements and processes to limit human exposure to hazardous substances remaining on the property and to maintain the integrity of the remedial action until RGs have been achieved. These requirements and processes may include deed restrictions, covenants, easements, laws, and regulations, and will be developed during the Land Use Control

Remedial Design (LUC RD). The Navy will prepare a LUC RD as the land use component of the Remedial Design as specified in the FFA schedule. The Navy shall prepare and submit to EPA, DTSC, and the Water Board for review and approval, a LUC RD that shall contain implementation and maintenance actions, including periodic inspections. ICs to be implemented at HPNS Parcel F may include:

- Parcel F Site-wide ICs - Procedures for the proper assessment of sediments and the segregation, proper management, and disposal of low-level radiological objects (e.g., radioluminescent dials, gauges, and deck markers) if encountered during future site redevelopment or other sediment disturbing activities such as dredging or sampling.
- Parcel F Areas III, IX and X ICs:
  - Restricted water uses to limit the potential for human exposure and protect the remedy from disturbance, including limitations on digging or clamming (**Figure 10**). The clamming and digging restrictions would be implemented by posting warning signs or public outreach and education.
  - Restricted activities in accordance with the Covenant(s) to Restrict Use of Property, and quitclaim deed(s):
    - Sediment disturbing activity, which includes: (1) dredging of sediments or (2) any other activity that involves movement of sediments.
    - Alteration, disturbance, or removal of any component of a response or cleanup action (including cap/containment systems).
    - Removal of or damage to security features or signs.
  - Periodic inspections and reporting requirements, including the statutory CERCLA FYR, to verify cleanup within Area III and Areas IX and X is functioning properly.

The Navy is responsible for implementing, maintaining, reporting on, and enforcing ICs. Although the Navy may later transfer these procedural responsibilities to another party by contract, property transfer agreement, or through other means, the Navy shall retain ultimate responsibility for integrity of the remedy.

Monitoring and Maintenance

The selected remedies for Areas III, IX, and X include the monitoring and maintenance activities that will be performed, as long as necessary, to achieve the RAOs and to comply with the substantive provisions of pertinent state and federal ARARs (see **Attachment 4**). In addition, the selected remedies will be subject to statutory reviews every 5 years pursuant to CERCLA to ensure that they remain protective of human

health and the environment. The details of the monitoring programs will be developed during remedial design. Performance and long-term effectiveness monitoring details, including the frequency and triggers, will be included in a post-remedial action monitoring plan.

Baseline Monitoring

Baseline monitoring will be performed prior to remedy implementation to characterize pre-remedy conditions and to aid in the design of the remedy prior to construction. Baseline monitoring may include sediment sampling as well as hydrodynamic modeling within Areas III, IX, and X.

Baseline monitoring results would be used to refine the various remediation zones (removal and capping within Area III, and focused removal with backfill, *in situ* treatment, and MNR within Areas IX and X) before construction begins. Remediation zone footprints would be refined based on surface sediment (0 to 6 inches) concentrations. Removal depths would be refined based on the collection and analysis of sediment cores. Hydrodynamic modeling would be used to aid in the design of cap, post-removal backfill, and *in situ* amendment placement to resist erosion from tidal currents and wave action. The details of a baseline monitoring study, including the need for such investigation, will be determined during the remedial design.

Construction Monitoring

Monitoring will be implemented during remedial activities for construction quality control and to minimize off-site impacts. Care will be taken during construction to not affect adjacent sediment sites. Construction monitoring is conducted to confirm mitigation controls are effective and ensure target cleanup levels are achieved. BMPs such as silt curtains will be in place to control sediment migration during remediation activities occurring along the shoreline. Construction monitoring for dredging would include: water quality monitoring; confirmation sampling; and, as prescribed in the remedial design, bathymetric surveying to ensure sediments are removed to required depths, backfill and cap materials are placed to required elevations, and *in situ* treatment materials are placed appropriately. Post-excavation, sediment confirmation samples will be collected for all COCs (copper, lead, mercury, and PCBs).

Performance Monitoring

After the remedy is implemented, performance monitoring will be conducted to verify that the remedy is performing as intended and off-site impacts are minimized. Immediately following construction, data will be collected to ensure that backfill, capping, and *in situ* treatment materials have been placed to design specifications.

Physical inspections (e.g., for erosion) of the backfill and cap remediation zones in Area III and the focused removal with backfill remediation zone in Areas IX/X will be conducted annually in years 1 through 5 post-construction, and then at 5-year intervals during the FYR process thereafter. Bioavailability monitoring, such as porewater or biota analysis and carbon amendment mixing zone depth, will also be conducted annually in years 1 through 5 post-construction, and then at 5-year intervals during the FYR process thereafter. Inspections, monitoring, and repairs, as necessary, will be conducted of the backfill and cap zones and Areas IX/X *in situ* treatment area after high intensity storms. The FYR process will include sediment sampling and Areas IX/X *in situ* treatment area bioavailability monitoring to ensure that the remedy continues to perform as designed. If it is determined that the remedy is not performing as intended, contingency measures will be evaluated and implemented as necessary.

Long-Term Remedial Goal Monitoring

Long-term RG monitoring of surface sediments will be conducted in the Area IX and X MNR remediation zone to monitor progress towards achieving the RAO 3 148 µg/kg total PCB RG on an AWA basis, and to minimize off-site impacts. Sediment sampling density within the MNR remediation zone will be designed in a manner to provide statistically defensible coverage of the MNR remediation zone. Surface sediment PCB concentrations within the MNR remediation zone will be used to calculate area-weighted PCB concentrations and then an AWA PCB concentration that will apply to all of Areas IX and X. The first FYR is due 5 years from the start of remedial action at the first HPNS operable unit. Parcel F FYR will occur according to the schedule for the overall HPNS site. Long-term RG monitoring within the Area IX and X MNR remediation zone will be conducted annually during the first 5 years post-construction and then at 5-year intervals thereafter until the RAO 3 RG is achieved on an AWA basis. Results will be incorporated into the FYR. Long-term remedial goal monitoring will cease when the RAO 3 RG has been achieved in Areas IX and X.

Long-term RG monitoring will not be conducted in Area III or in the focused removal with backfill remediation zone of Areas IX and X, because all RAO RGs will be achieved immediately after remedy implementation. Long-term RG monitoring will not be conducted in the *in situ* treatment remediation zone either because PCBs will be left in-place. However, the *in situ* treatment will bind to the PCBs in sediment, making them unavailable for uptake by benthic organisms and subsequent biomagnification up the food chain. Therefore, the bioavailability of PCBs resulting from Navy activity will be significantly reduced, resulting in human and ecological risk reduction, until MNR results in achievement of the RAO 3 RG. South Basin is a net depositional environment, and sediment from the greater San Francisco Bay will overlay the *in situ* treatment

remediation zone over time. Periodic post-remedial action bathymetric surveys will be conducted to confirm sediment deposition in Areas IX/X.

2.10.3 Expected Outcomes of the Selected Remedy

Implementation of the selected remedies will result in RAO achievement and a reduction of human health and ecological risk to acceptable levels as described below:

- Removal and off-site disposal of contaminated sediments will reduce site risks.
- *In situ* treatment will reduce the bioavailability of PCBs thus reducing toxicity and contaminant uptake to benthic organisms and animals that feed on these organisms.
- Capping within Area III will isolate and prevent exposure to marine animals to contaminated sediments.
- MNR will rely on the deposition of clean material to reduce surface sediment contaminant concentrations and site risk.
- ICs will maintain protectiveness of the remedy by limiting actions that may damage the remedy, and through periodic monitoring and maintenance.

The timeframe for achieving future recreational and navigational waterway uses of Parcel F by implementing the selected remedies could vary from 8 to 13 years. This timeframe could be significantly impacted by funding and speed of regulatory concurrence on plans and completion of remediation. In addition, there is uncertainty in the parameters that influence recovery and recovery projections, which could influence, and potentially shorten, the actual timeframes for achieving future uses. Since Area IX/X is a net depositional environment, PCB concentrations, as of the date of this ROD, may have reduced since sampling was conducted in 2002-2003. Recovery through MNR is a component of the selected remedy for Areas IX/X, whereas there is not an MNR component for the selected remedy for Area III.

2.10.4 Statutory Determinations

In accordance with the NCP, the selected remedies meet the following statutory determinations.

- **Protection of Human Health and the Environment** – The selected remedies will adequately protect human health and the environment by preventing exposure to COCs through (1) removal and off-site disposal of sediments; (2) *in situ* treatment to reduce the bioavailability, toxicity, and uptake of PCBs in sediment; (3) capping to isolate and prevent exposure to contaminated sediments; (4) MNR to reduce contaminant concentrations through deposition of

cleaner material; and (5) ICs to prevent exposure to site contaminants by recreational fishers through fish and shellfish consumption, and to maintain protectiveness of the remedy by limiting actions that may damage the remedy and through periodic monitoring and maintenance.

- **Compliance with Applicable or Relevant and Appropriate Requirements** – CERCLA § 121(d)(1) states that remedial actions on CERCLA sites must attain (or the decision document must justify the waiver of) any federal or more stringent state environmental standards, requirements, criteria, or limitations that are determined to be legally applicable or relevant and appropriate. The selected remedies for Parcel F will comply with the substantive provisions of the federal and state requirements identified as ARARs.
- **Cost-effectiveness** – As specified in the NCP, the cost-effectiveness of a remedy is determined in two steps. First, the overall effectiveness of a remedial alternative is determined by evaluating the following three of the five balancing criteria: (1) long-term effectiveness and permanence; (2) reduction in toxicity, mobility, or volume through treatment, and (3) short-term effectiveness. The overall effectiveness is compared to cost to determine whether a remedy is cost-effective. The selected remedies have a high overall effectiveness because, relative to the other remedial alternatives, they offer a high degree of long-term effectiveness in a manner that maximizes the use of treatment (to reduce the toxicity, mobility, or volume of contaminants) and minimizes short-term risks. The selected remedy will provide high overall effectiveness proportional to their costs and is therefore considered cost-effective.
- Use of Permanent Solution and Alternative Treatment Technologies (or Resource Recovery Technologies) to the Maximum Extent Practicable – The Navy has determined that the selected remedies represent the maximum extent to which permanent solutions and treatment are practicable at this site. The selected remedies include treatment components to reduce toxicity, mobility, or volume of PCBs in sediment through *in situ* treatment with carbon-based amendments.

Five-Year Review Requirements – Statutory FYRs pursuant to CERCLA §121 and the NCP will be conducted because the selected remedies may leave contamination in place at Parcel F above levels that allow for unrestricted use and unlimited exposure. FYRs for Parcel F will follow the ongoing schedule of FYRs established for other remedies in place at HPNS.

2.10.5 Documentation of Significant Changes

Following the Proposed Plan public comment period and development of the draft and draft final ROD, a lower PCB background value was evaluated in response to a

comment from the Water Board. The impact of the lower PCB background value is described in the Technical Memorandum (ECC-Insight and CDM Smith, 2022) included in **Attachment 5 (Part 3)**.

The technology assignment framework (i.e., which remedial technology is planned to be employed in which grid location), for Areas IX/X was modified in this ROD to minimize impacts to the Yosemite Slough remedial action by increasing the removal area in close proximity to Yosemite Slough. This modification achieves a lower overall post-remedial action PCB AWA concentration of 193 ug/kg for Area X, thereby reducing the MNR timeframe to achieve RAOs in Area X. This modification is documented in the *Final Technical Memorandum Revision to Total PCB Background Concentration and RAO 3 Remediation Goal* (ECC-Insight and CDM Smith, 2022), presented in **Attachment 5 (Part 3)**. Future adjustments to the technology assignment framework will be made during the remedial design based on pre-remedial action sediment characterization data and regulatory agencies' concurrence. Based on the evaluation, documented in the 2022 Technical Memorandum (ECC-Insight and CDM Smith 2022; **Attachment 5 [Part 3]**), no significant changes were made to the remedy for Areas IX/X from the information presented for the preferred alternative for Areas IX/X in the Proposed Plan.

The revised PCB background value does not influence the Area III preferred remedy. Therefore, no changes were made to the selected remedy for Area III from the information presented for the Area III preferred alternative in the Proposed Plan.

2.11 Community Participation

Community participation at HPNS includes public meetings, public information repositories, newsletters and fact sheets, public notices, and site tours. The community involvement plan for HPNS provides detailed information on community participation and documents interests, issues, and concerns raised by the community regarding ongoing investigation and cleanup activities at HPNS.

In accordance with CERCLA § 113 and § 117, the Navy provided a public comment period from April 7 to May 7, 2018, for the proposed remedial actions described in the Proposed Plan for Parcel F. A public meeting to present the proposed plan was held on April 11, 2018, at Office of the Community Investment and Infrastructure Community Room, 451 Galvez Avenue, San Francisco, California. At the public meeting, the Navy gave presentations on the conditions at Parcel F and representatives from the Navy and regulatory agencies were available to answer questions. A court reporter documented Public Comments (**Attachment 3**) as part of the Responsiveness Summary, included as part of the Administrative Record for this ROD. Responses to spoken comments

received during the public meeting and written comments received during the public comment period are included in the Responsiveness Summary in **Attachment 3**. Key supporting documents that pertain to Parcel F and a complete index of all Navy HPNS documents are available at the following information repositories:

- City of San Francisco Main Library Science, Technical, & Government Document Room
  100 Larkin Street, San Francisco, CA 94102
  (415) 557-4400
- U.S. Navy Hunters Point Naval Shipyard Site Trailer
  690 Hudson Ave, San Francisco, CA 94124
- Superfund Records Center
  Mail Stop SFD-7C
  75 Hawthorne Street, Room 3110
  San Francisco, CA 94105
  (415) 820-4700

The Administrative Record is also available electronically at:

https://administrative-records.navfac.navy.mil/?M7Q7P6J7G4PK3KL

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3.0 Responsiveness Summary

The responsiveness summary is the third component of a ROD; its purpose is to summarize information about the views of the public and regulatory agencies on both the remedial alternatives and general concerns about Parcel F submitted during the public comment period. It documents in the record how public comments were integrated into the decision-making process. The participants in the public meeting, held on April 11, 2018, included community members and representatives of the Navy, EPA, DTSC, and the Water Board. Questions and concerns received during the meeting are documented in the meeting transcript (**Attachment 3**). Responses to comments provided at the meeting and received during the public comment period by the Navy, EPA, DTSC, or the Water Board are included in the responsiveness summary (**Attachment 3**).

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Table of Contents

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Acronyms and Abbreviations

ARAR	applicable or relevant and appropriate requirement
BBL	Battelle, Blasland, Bouck & Lee, Inc.
BCDC	San Francisco Bay Conservation and Development Commission
BCT	Base Realignment and Closure Cleanup Team
BRAC	Base Realignment and Closure
CBG	Committee to Bridge the Gap
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COC	chemical of concern
CSM	conceptual site model
DTSC	California Department of Toxic Substances Control
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ER-M	effects range - median
FEMA	Federal Emergency Management Agency
FS	Feasibility Study
HPNS	Hunters Point Naval Shipyard
IBNA	India Basin Neighborhood Association
IC	Institutional control
µg/kg	micrograms per kilogram
mg/kg	milligrams per kilogram
MNR	monitored natural recovery
Navy	United States Department of the Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
OEHHA	Office of Environmental Health Hazard Assessment
OPC	California Ocean Protection Council
PAL	project action level
PCB	polychlorinated biphenyl
PRG	preliminary remediation goal

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

RAO	remedial action objective
ROC	radionuclides of concern
ROD	Record of Decision
§	Section
SLERA	screening level ecological risk assessment
U.S.	United States
Water Board	San Francisco Bay Regional Water Quality Control Board
YSCPG	Yosemite Slough Cooperating Parties Group

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Index to Responsiveness Summary

Comments received during the public comment period are organized alphabetically as follows – on the electronic version, the names are hyperlinked:

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

1. GENERAL RESPONSES

The United States Department of Navy (Navy) has prepared the following General Responses on the following topics to support the Responsiveness Summary for the Public Comments on the following topics:

1. Truck Route for Off-Site Disposal, Air and Dust Monitoring;
2. Yosemite Slough Remedial Action and Coordination;
3. Radiological Analytical Data for Hunters Point Naval Shipyard (HPNS) Parcel F; and
4. List of HPNS Parcel F and General References.

.....

General Response 1. Truck Route for Off-Site Disposal, Air and Dust Monitoring

The proposed remedy for HPNS Parcel F does involve excavation of contaminated sediment from Areas III, IX, and X for off-site disposal to a landfill. Any material removed using land-based equipment will be managed to minimize the potential for the release of contamination during transport and handling.

All means of transporting contaminated material will be designed and managed to minimize dust generation and address air quality concerns in accordance with the HPNS base-wide dust control plan. A project specific dust control plan will be prepared prior to the removal actions at Parcel F and will need to be approved by the Base Realignment and Closure [BRAC] Cleanup Team (BCT) and will include the following:

1. **Approved Truck Route** – *Exhibit 1* shows the current approved truck route from HPNS for contaminated material that will need to be transported on land. The truck route will be evaluated prior to the construction phases with input from the public along with the BCT.

2. **Air Monitoring** – The Navy conducts daily monitoring for air quality, both upwind and downwind during construction activities. On-site air monitoring equipment will monitor all construction activities. The air monitoring data is submitted to the Bay Area Air Quality Management District (BAAQMD) and the Department of Toxic Substances Control (DTSC).

3. **Dust Control Measures** – The following dust control measures are currently in place for all construction activities and will be included for the proposed construction activities at HPNS Parcel F:

- Misting systems are used to wet down work areas and roads;
- Stockpiles of soil are coated with a biodegradable polymer to minimize windblown dust;
- 15-mile per hour (mph) speed limit is enforced base-wide and 5 mph speed limit is enforced for active work areas;
- All truck beds containing soil (even clean soil) are required to be covered;
- Raised strips (or rumble strips) are placed at the exits of the construction areas to vibrate truck tires and loosen soil caught in the treads. In addition, a tire wash station also helps remove excess dirt and dust form truck tires;
- Street sweeping; and
- Construction operations are shutdown if conditions become too windy.

4. **Portal Monitoring for Truck Screening** – Trucks entering and leaving HPNS pass through a portal monitor which screens for radiation. If any elevated radiation is detected, the monitor sounds an alarm and further evaluation of the truck load is conducted.

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

General Response 2 - Yosemite Slough Site Remedial Action and Coordination

The Navy acknowledges that the remedy for Area X and the cleanup planned for the Yosemite Slough site must both be effective and protective and implemented in a manner that minimizes the potential for recontamination. The cleanup action selected by the Environmental Protection Agency (EPA) for Yosemite Slough includes dredging, capping, enhanced monitored natural recovery (MNR), and is compatible with the proposed cleanup at Parcel F which includes removal, backfill, *in situ* treatment, and MNR. The Navy understands that the planned remedial activities for Area X and the Yosemite Slough site should be compatible with respect to timing and constructability to ensure that the cleanups are complimentary and to minimize any potential for recontamination of either area.

The cleanup goals developed for the Yosemite Slough site were developed in part based on the cleanup goals developed for HPNS as noted in the Final Engineering Evaluation/Cost Analysis for Yosemite Slough (Ecology and Environment, 2013) and Action Memorandum for the Yosemite Slough Site (USEPA, 2014).

Yosemite Slough was identified as a potential source of contamination to Parcel F in Figure 3 of the Proposed Plan based on detections of polychlorinated biphenyls (PCBs) in Yosemite Slough and tidal exchange between Yosemite Slough and the South Basin.

The Feasibility Study (FS) Data Gaps Investigation Report (Barajas et al., 2007) identified Yosemite Slough and the Parcel E-2 landfill as the two apparent major sources of PCBs to the South Basin. The report also concluded that the presence of elevated PCB concentrations in surface sediments in Yosemite Slough suggested that there may be ongoing sources to the Yosemite Slough. The Validation Study Report (Battelle et al., 2005) concluded that given the weak tidal circulation in the South Basin, significant upstream transport of contaminated sediments from the Parcel E shoreline adjacent to the Parcel E-2 landfill into Yosemite Slough is unlikely. However, additional sediment data will be collected prior to implementation of the remedy to ensure that the remedial actions are conducted to meet the Remedial Action Objectives (RAOs) in both areas.

General Response 3 – Radiological Data Concerns for HPNS Parcel F

A detailed investigation of radionuclides was conducted at Parcel F. The results are presented in the Addendum to the FS Report for Parcel F (KCH, 2017). Three phases of investigation focused on radionuclides were conducted between 2009 and 2013 (see Table 1 in General Response 4). The investigations included a Phase 1 screening investigation (2009) and a Phase 2a data gaps investigation (2011) as presented in Battelle and Sea Engineering (2013), and a Phase 2b data gaps investigation (ITSI Gilbane and SAIC, 2013). The investigations were used to support the 2017 FS Addendum (KCH, 2017). The investigations included 247 Parcel F sediment cores which generated more than 1,058 sediment samples for laboratory analysis, 800 of which were analyzed for radionuclides. The resulting data was used to assess radiological risks to recreational users at HPNS. Radiological risks were estimated as $4x10^{-6}$ for exposure to the intertidal sediments and $6x10^{-8}$ for exposure to subtidal sediments. These risks are within or below the EPA acceptable risk range of 10^{-6} to 10^{-4}.

Regarding background, it is known that background levels of radionuclides occur naturally. The radionuclide investigation collected 18 reference area cores for radionuclide analysis and determined that the Parcel F median radionuclide sediment concentrations were equal to or less than the median background concentrations for all six radionuclides of concern.

Based on an evaluation of radionuclide risk at Parcel F and evaluation with respect to background, it was determined that remediation of radionuclides in sediment is not required at the HPNS Parcel F.

Regarding the general concern about radiological data collected by Tetra Tech, please see the latest Navy updates on the HPNS BRAC site:

https://www.bracpmo.navy.mil/brac_bases/california/former_shipyard_hunters_point/RadiologicalCleanup.html

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

General Response 4 - List of HPNS Parcel F and General References used in the Responsiveness Summary

Table 1 lists references for HPNS Parcel F References are available in the following repositories:

City of San Francisco Main Library Science, Technical, & Government Document Room
100 Larkin Street
San Francisco, CA 94102
(415) 557-4400

United States Navy Hunters Point Naval Shipyard Site Trailer
690 Hudson Ave
San Francisco, CA 94124
Superfund Records Center

Mail Stop SFD-7C
75 Hawthorne Street, Room 3110
San Francisco, CA 94105
(415) 947-8717

The Parcel F administrative record file is located at:

Naval Facilities Engineering Command Southwest
2965 Mole Road, Building 3519
San Diego, CA 92136

Command Records Manager, Diane Silva, can be reached at (619) 556-1280

In addition, the Navy and Department of Toxic Substances Control (DTSC) have electronic versions of the documents posted for public review at the following web sites:

1) Navy Web site:

   https://www.navfac.navy.mil/products_and_services/ev/products_and_services/env_restoration/administrative_records.html?fromDate=DD-MON-YYYY&toDate=DD-MON-YYYY&p_instln_id=HUNTERS_POINT_NS&basic=&title=&sites=&author=&keywords=

2) DTSC web site:

   https://www.envirostor.dtsc.ca.gov/public/profile_report?global_id=38440007

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Table 1- List of HPNS Parcel F References

Year	Author	Reference Title	Description
1991	Aqua Terra Technologies	Environmental Sampling and Analysis Plan	Characterization of chemicals in sediment, water chemistry, and toxicity.
1991	United States Environmental Protection Agency (USEPA).	Applicable or relevant and appropriate requirements (ARARs) Q's and A's: General Policy, RCRA, CWA, SDWA, Post-ROD information, and Contingent Waivers. OSWER Publication 9234.2-01/FS-A.	Guidance on ARARs general policy.
1994	PRC Environmental Management, Inc. (PRC)	Phase IA Ecological Risk Assessment	Qualitative analysis of existing site data, biotic surface areas, and offshore areas.
1996	PRC	Phase IB Ecological Risk Assessment, Hunters Point Shipyard, San Francisco, California. Volume I, Part 1: Nature and Extent of Contamination, and Part 2: Risk Characterization to Aquatic Receptors. Draft.	Characterization of Phase 1 data gaps and completion of a screening levels risk assessment. Included collection of sediment core samples.
1998	Tetra Tech and Levine-Fricke-Recon	Parcel F Feasibility Study Draft Report	Delineation of preliminary remediation footprints based on screening criteria. Identified Areas I, III, VIII, IX, and X as areas with the highest potential ecological risk.
2004	Germano & Associates, Inc.	Sediment Profile Imaging Report: Benthic Macrofauna Activity	Sediment profile image study determined that the depth of the biologically active Zone in marine sediments averages about 10 centimeters and rarely exceeds 30 centimeters.
2005	Battelle, Blasland, Bouck & Lee, Inc. (BBL) and Neptune and Company	Final Hunters Point Shipyard Parcel F, Validation Study Report	Sediment characterization focused on evaluation of chemical distribution within each focus area. Determined that the primary chemicals posing ecological risk were copper and mercury in Area III and PCBs in Area X. Also determined that PCBs posed potentially unacceptable risks to human health in Areas IX and X.

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Year	Author	Reference Title	Description
2006	URS Corporation	Draft Environmental Impact Report for the Trans Bay Cable Project. Available Online at: <http://www.ci.pittsburg.ca.us/pittsburg/pdf/tbc/>.	Marine mammals observed using the bay waters around HPNS include the California sea lion (*Zalophus californianus*) and harbor seal (*Phoca vitulina*). Harbor seals, which are the only marine mammals that are permanent residents in the bay, use rocks or sand flats as resting areas (haul-out sites).
2007	SulTech	Parcels E and E-2 Shoreline Characterization Technical Memorandum	A shoreline investigation was conducted to evaluate contaminant migration to Parcel F from Parcels E and E-2. The investigation also included a screening level ecological risk assessment (SLERA). The shoreline investigation and SLERA determined that source control measures were warranted along the shoreline at Parcels E and E-2 and that remedial alternatives should be evaluated to address the potential risk to invertebrates, birds, and mammals.
2007	Barajas and Associates, Battelle, Neptune & Company, and Sea Engineering, Inc. [Barajas et al., 2007]	Technical Memorandum, Hunters Point Shipyard Parcel F, Feasibility Study Data Gaps Investigation	Further delineated and refined the extent of chemical release, evaluated toxicity, and assessed human and ecological risk.
2008	Barajas and Associates	Parcel F Feasibility Study	Proposed RAOs, and evaluated cleanup alternatives and costs for Parcel F sediment contamination.
2013	Battelle and Sea Engineering	Battelle and Sea Engineering, Inc. 2013. Technical Memorandum for Radiological Data Gap Investigation Phase 2a at Parcel F	Phase 1 nature and extent of radionuclides at HPNS Parcel F.
2013	ITSI Gilbane and SAIC	Final Technical Memorandum for Radiological Data Gap Investigation Phase 2b at Parcel	Phase 2b Data Gaps Radiological investigation in Parcel F Sediment.
2017	ECC-Insight, LLC and CDM Smith	Final Technical Memorandum, Optimized Remedial Alternative for Parcel F	Presents the technology assignment framework used to assess the applicability as well as the development of an optimized alternative for HPNS Parcel F.
2017	KCH	Final Addendum to the Feasibility Study Report for Parcel F	Characterization of radionuclides in sediment. The investigations included a Phase 1 screening investigation (2009), a

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Year	Author	Reference Title	Description
			Phase 2a data gaps investigation (2011), and a Phase 2b data gaps investigation.
2018	KCH	Final Demonstration of Activated Carbon Amendments to Reduce PCB Bioavailability.	Results of activated carbon pilot study at HPNS Parcel F.

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Table 2 – List of General References

Year	Author	Reference Title	Description
1988	Jacobs, L., R. Barrick, and T. Ginn.	SedCam Model	Used to evaluate reductions in sediment concentrations through remediation.
1991	United States Environmental Protection Agency (USEPA).	ARARs Q's and A's: General Policy, RCRA, CWA, SDWA, Post-ROD information, and Contingent Waivers. OSWER Publication 9234.2-01/FS-A.	Guidance on ARARs general policy.
2009	Magar, V., B. Chadwick, T. Bridges, P. Fuschsman, J. Condor, T. Dekker, J. Steevens, K. Gustavson, and M. Mills	Technical Guide. Monitored Natural Recovery at Contaminated Sediment Sites. ESTCP Project ER-0622.	Technical guidance for evaluating and implementing monitored natural recovery (MNR) at contaminated sediment sites.
2013	Ecology and Environment	Final Engineering Evaluation/Cost Analysis for Yosemite Slough	Non-time-critical removal action was selected.
2013	USEPA	ProUCL users guide	Statistical software for environmental applications.
2014	USEPA	Action Memorandum for the Yosemite Slough Site	Non-time-critical removal action was selected.
2015	USEPA	Climate Change Adaptation Technical Fact Sheet: Contaminated Sediment Remedies	

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Written Comment by Anonymous 1 received during the Public Meeting on April 11, 2018.		**Response**
COMMENTS		
1.	Area III – Cap should extend along the start of material recovery area, plus regular testing of area that is more than 30 ft. Collect regular samples of all sites. Communication with the City and Lennar about plans.	The Validation Study concluded that Area III poses a potential risk to birds feeding on benthic invertebrates and fishes. The surf scoter, which forages in water depths less than 30 feet was selected as the representative species in evaluating ecological risk at Area III. Therefore, the footprint of the planned cap will be designed to prevent exposure of the surf scoter to site contaminants. The Navy intends to conduct baseline monitoring prior to remedy implementation to characterize pre-remedy conditions and to aid in the design of the remedy prior to construction. The cap and dredging footprints in Area III may be revised based on baseline monitoring results. Details regarding sampling to be conducted to assess baseline conditions and performance of the remedy will be developed as part of the remedial action work plan, prior to remedy implementation. The Navy will communicate regularly with the City and Lennar about the progress of the cleanup and any sampling results. The City is part of the Base Realignment and Closure (BRAC) Cleanup Team (BCT) and frequent communication, including monthly face to face meetings, are conducted to discuss progress of the remedial actions conducted at HPNS.

Verbal Comment by Anonymous 2, recorded by Court Reporter during Public Meeting, April 11, 2018.		**Response**
COMMENTS		
1.	The proposed plan should include a figure that shows all the sampling locations conducted within the bay, so that we can see the true extent of sampling that the Navy conducted.	The Record of Decision (ROD) [**Figures 2** and **3**] and this Responsiveness Summary (***Exhibits 2*, 3, and 4**) depict sediment sampling locations for Parcel F sediments.

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

Written comments by Liane Bauer received on May 7, 2018, via email.		**Response**
COMMENTS		
1.	**NOT A CLEANUP PLAN BUT A RISK REDUCTION PLAN** The proposed plan does not say it will remove the contamination, it says it will "protect the public and environment by reducing the risk of exposure to contaminated sediment" (pg. 1, italics added). This means the exposure will still be there and further means that the land will never actually be "cleaned up." This is not a "cleanup" plan, as the proposed plan consistently labels these actions, but one that marginally reduces risk of exposure, leaving substantial risk. Call it what it is so as not to confuse the public about the actual goals of the plan, please.	The Comprehensive Environmental Response Compensation, and Liability Act (CERCLA) requires all remedies to be protective of human health and the environment. The United States (U.S.) EPA defines CERCLA as follows: https://www.epa.gov/superfund-cleanup-process. CERCLA does not require removal of all material that poses unacceptable risks to human health or the environment. CERCLA allows for management of material in place (i.e., *in situ*) to reduce the risk to human health and the environment to protective levels. The proposed remedy is a combination of removal and other treatment options, evaluated in accordance with nine evaluation criteria. https://semspub.epa.gov/work/HQ/174406.pdf The two most important criteria are: 1. Overall protection of human health and the environment, and 2. Compliance with ARARs. Five primary balancing criteria are: 1. Long-term effectiveness and permanence, 2. Reduction of toxicity, mobility, or volume through treatment, 3. Short-term effectiveness, and 4. Implementability. The two modifying criteria are: 1. State acceptance, and 2. Community acceptance. The proposed remedy contains excavation and off-site disposal to a landfill as part of the cleanup. A summary of the remedies for each area are: For Area III, contaminated sediments exceeding the Remedial Action Objective (RAO) 1 remedial goals (RGs) in the nearshore area too shallow to be capped will be removed to a depth of two feet followed by backfilling with clean sediment to pre-removal elevations. Beyond the nearshore area, contaminated sediments in water depths less than 30 feet will be capped. An estimated 68,670 square feet of contaminated sediment will be capped with approximately 2 feet of material. For Areas IX and X, intertidal sediments that exceed RAO 1 RGs will be removed to a depth of approximately 1 foot (final depth to be determined during the Remedial Design). An estimated 39,000 cubic yards of sediment is expected to be removed. For the subtidal areas, the remedy will depend on the

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

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		concentrations identified in sediment and consists of a combination of removal and backfill, *in situ* treatment and MNR. Long-term performance and remedial goal monitoring will be performed in the appropriate remediation zones of Areas III, IX, and X. These monitoring results will be presented in Five Year Review reports that assess the ongoing protectiveness of the remedy and to ensure that the remedy is performing as intended and remains protective over time.
2.	**HOW DID THE OTHER AGENCIES REVIEW THIS PLAN FOR CONCURRENCE? WHAT WERE THE STANDARDS OF REVIEW?** - The EPA, the CDTSC (California DTSC), the SFRWQCB (the water board) all reviewed the document and "concur with the Navy's preferred clean up alternatives" (pg. 1). What was the process of review by these agencies? Did they simply rubberstamp the plans or did each agency honestly consider the alternatives and the potential impacts? The concurrence process should be disclosed to the public to affirm the integrity and honesty of that process. And since those same agencies reviewed and concurred with the prior Hunters Point work that has now been demonstrated to be falsified and incapable of protecting public health, there should be a discussion as to the steps made by each agency to correct the factors that led to their prior failures in oversight. - Discussions with regulatory agencies regarding acceptance need to be disclosed to the public to affirm honesty and integrity of discussions and review. The Proposed Plan states that "State acceptance will be evaluated through on-going discussion with State of California regulatory agencies" (pg. 11). These discussions should be disclosed to the public and interested parties to affirm the integrity and honesty of evaluations of the proposed plans.	State of California concurrence with the selected remedy has been evaluated through on-going discussions with State of California regulatory agencies. These agencies provided comments and concurrence on the documents identified in Table 1 (General Response 4) including the Parcel F FS (Barajas and Associates, 2008) which provides the basis for the selected remedy. All CERCLA documents are reviewed and commented on by the BCT, and comments are addressed and resolved prior to the document becoming final. The BCT includes the U.S. EPA Region IX, California DTSC and affiliated agencies (e.g. Fish and Wildlife), and the San Francisco Regional Water Quality Control Board (SFRWQCB or Water Board). Concurrence on the selected remedy for the Hunters Point Naval Shipyard Site are part of the administrative record for the site and, as such, are available for public review. The BCT has reviewed and concurred with the Proposed Plan.
3.	**WHY IS CLEANUP ONLY HAPPENING IN THREE AREAS?** - The proposed plan says that "active clean up" will be limited to three areas, Area III, Area IX, and Area X, (pg. 1) because those areas are "the only parcel F areas that pose unacceptable risk to human health or the environment" (pg. 1, italics added). However, the proposed plan says that Parcel F is made up of 11 subareas. (pg. 4.) The proposed plan says the chemical concentrations in other areas "do not pose unacceptable risk to human health or to the	Numerous investigations of Parcel F sediments took place between 1991 and 2015 (see General Response 4, Table 1). The results of these investigations are presented in numerous reports and documented in the administrative record. As described in the ROD, Areas III, IX and X are the only areas that were found to pose an unacceptable risk to human health or the environment. See additional detail in Liane Bauer Response #4.

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

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	environment" (pg. 4). So I ask, what are these levels and what risk, if any, do they pose to human health and the environment? It is unreasonable to expect people to support or oppose a proposed plan that is being put forward purely on your assertion that it is acceptable, with no evidence supporting, particularly with the current scandal facing the shipyard. This should be stated clearly in the Final Proposed Plan.	
4.	**PROPOSED PLAN RELIES ON (TECHNOLOGICALLY) OUTDATED DATA** - The proposed plan is relying on site inspection data from the "1991 Environmental Sampling and Analysis Plan" and from the "1994 Phase 1A and 1996 Phase 1B Ecological Risk Assessments" (pg. 3) which means the Navy is relying on contamination data from over 20 years ago. Not only does contamination migrate, but newer and improved technology can and should be used to retest the area and see whether contamination levels are the same or worse in all areas of Hunters Point. Why is the Navy relying on such old data? Furthermore, who conducted the site inspection and is that inspection data accurate? I ask because we all know that the Navy has a track record of hiring companies who are willing to return false or fabricated data regarding contamination levels. I am referring to Tetra Tech. Furthermore, the Navy's inadequate oversight contributed to the Tetra Tech matter and undermines the credibility of all such measurements.	The majority of the data used to assess risk to human health and the environment and to evaluate remedial action alternatives in the Parcel F FS were collected in 2003. These data are presented in the 2005 Validation Study Report (Battelle et al., 2005) and the 2007 FS Data Gaps Investigation Report (Barajas et al., 2007). Supplemental sediment data were collected between 2011 and 2015 and are presented in the 2017 FS Addendum (KCH, 2017). The Navy plans on collecting additional data prior to implementing the remedy to refine the areas that will require cleanup under the selected Remedy. In addition, the Navy will perform long-term performance and remedial goal monitoring within the appropriate remediation zones to verify the protectiveness of the remedy following implementation. The results of this monitoring will be presented in Five-Year Review reports, also available in the public administrative record.
5.	**WHY WERE RISK TO OTHER GROUPS BESIDES ADULTS NOT ASSESSED?** - The Proposed Plan says that "the Navy calculated the potential cancer and noncancer risk to adults from eating fish and shellfish and direct contact with sediment during shellfish collection" (pg. 7) which means the proposed plan is explicitly stating that it only assessed risk to adults and not to children who may come in direct contact with the shores, perhaps assisting a parent with fish and shellfish collection. It's ridiculous and irresponsible to assume children are unaffected by shellfish contamination. If you truly want to protect the community you need to take the child consumption pathway and all other consumption pathways into consideration.	Risks to children associated with the direct contact of sediment and fish consumption were evaluated in the Validation Study Report (Battelle et al., 2005). As presented in Table 9-7 of the Validation Study Report (Battelle et al., 2005), risks to children associated with direct contact were within EPA's acceptable risk range and the noncancer hazard index was below one.

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

6.	**NOT ENOUGH PATHWAYS OF EXPOSURE WERE CONSIDERED** - The Proposed Plan lists only a few examples of how individuals may be exposed to contaminated sediment. These examples include "individuals consuming shellfish and sportfish" and "individuals incidentally exposed to sediment during harvesting and cleaning of shellfish" (pg. 6). However, there are a multitude of ways for humans to be exposed to these contaminated sediments, especially on a shoreline. Why are other methods of exposure not listed, considered, or studied? The same goes for the decision to only study the "surf scoter (bird)" as a "representative ecological receptor that forages within Area III and Areas IX/X for food" (pg. 6). Why was only the Scoter selected and why weren't other species also studied and considered? The Proposed Plan says the "surf scoter, feeding on organisms, such as clams, snails, worms, or insects [...] was chosen as a representative species due to its feeding pattern and presence at the site" (pg. 7). However other species do feed and dwell in that same area with similar feeding patterns, so these species should also be considered for a comprehensive and complete understanding of effects. Please include all this information in the Proposed Plan as this is necessary to know when considering the cumulative and comprehensive effects of contaminated sediment on the local environment and to future human uses of the area.	The Parcel F human health evaluation focused on the potential human health impact from exposure to offshore sediment in HPNS study Areas I, III, VIII, IX, and X. Based on available information regarding the likely future land uses at HPNS, it was determined that potential exposures to humans could occur as the result of consumption of aquatic species such as fish and shellfish, and direct contact with sediment during shellfish collection. These exposure scenarios are consistent with the development of risk estimates based on an estimate of the reasonable maximum exposure (RME) expected to occur under both current and future land-use conditions. The reasonable maximum exposure is defined in EPA guidance as the highest exposure that is reasonably expected to occur at a site. The Parcel F ecological risk evaluation presented in the 2005 Validation Study Report (Battelle et al., 2005) considered three lines of evidence – sediment chemistry, sediment toxicity and bioaccumulation, and ecological risks were evaluated based on a weight of evidence approach that considered each line of evidence. The evaluation concluded that sediment toxicity was within acceptable levels throughout Parcel F. Uptake of chemicals from sediment to benthic invertebrates was evaluated to support risk estimates to birds, such as the surf scoter, that primarily feed on mollusks. The surf scoter, a diving duck, was selected as a representative receptor for the following reasons: • The surf scoter is present in large numbers from late fall through winter at Parcel F. • The surf scoter is a benthic-feeding bird that forages primarily on mollusks. As such, it is exposed directly to contaminated sediment. Additionally, because scoters feed primarily on bivalves, food-chain modeling using clam tissue could be used in the exposure models. • The surf scoter can feed in the intertidal zone during high tide and forages in the subtidal to depths in excess of 20 feet. Therefore, it can represent species potentially exposed to both intertidal and subtidal habitats. Many other species are only appropriate for one habitat or the other. • There is a substantial body of relevant literature for surf scoters. For example, trace metal and organochlorine analyses of surf scoter tissue and prey items have been reported from British Columbia to San Francisco Bay and form a good data set for evaluation of risk. Concentrations of chemicals in clam tissue samples exposed under standard laboratory protocols to sediments from Parcel F were used to evaluate the risk to birds such as the surf scoter that feed on clams in the field. The results of this evaluation determined that surf scoters in Areas III, IX, and X may be at risk from ingested doses of copper, lead, mercury, and PCBs in sediment. Because

Responsiveness Summary
Parcel F, Hunters Point Naval Shipyard, San Francisco, California

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		the surf scoter is assumed to be present at the site 50 percent of the time, and because the surf scoter is assumed to exclusively consume shellfish that are in direct contact with Parcel F sediments, the Navy has determined that remediation of sediments containing PCBs, copper, and mercury to concentrations that protect the surf scoter will be protective of other wildlife that consume fish and shellfish at the site.
7.	**WEAK STANDARD OF CLEAN UP, LIMITING RISK IS NOT CLEANING UP** - The Proposed Plan begins with a weak cleanup objective when it states that the Remedial Action Objective 2 (RAO2) will "limit or reduce the potential risk to human health from eating shellfish from Parcel F" (pg. 8). This objective is weak because it accepts that a "limit" to potential risk is enough clean up and does not explicitly require any measures to actually reduce or lower potential risk. This would mean that the Navy only has to limit the future risk and exposure, keeping actual contamination as is, rather than beginning with an objective that would require physically lowering the risk. The objective is problematic because the Proposed Plan clearly states that "for the fish consumption exposure pathway, it [the Hazard Index] exceeds 1 for total PCBs, which indicates that adverse noncancer human health effects are possible" (pg. 7) and "in the ecological risk assessment, the Navy concluded that contaminated sediment in Parcel F poses a potential threat to wildlife" (pg. 7). Because of these effects and potential risks on human health and wildlife, the Navy should not simply "limit" potential risk but should be compelled to take effective measures to markedly reduce the risk by removing contamination. In short, a stricter objective than "limiting" the risk of exposure should be set. - The same comment is true for RAO 3 which is summarized on page 8 of the Proposed Plan. An objective of "limiting" and not specifically markedly "reducing" or eliminating risk is too weak considering the effects and potential risks to human health and wildlife.	As noted in the response to Bauer Comment #1, all remedies are implemented under CERCLA. Consistent with EPA guidance, RAOs are medium specific goals for protecting human health and the environment and specify the chemical of concern, the exposure route and receptor, and an acceptable cleanup level. The cleanup goals for the selected remedy are expected to be protective of human health and the environment based on the results of the human health and ecological risk assessments. The goal of the selected remedy is to achieve the acceptable cleanup levels through a combination of removal, containment, treatment and MNR. The Navy has determined that these actions represent "effective measures to markedly reduce risk" and include a substantial sediment removal component. The Navy has also determined that other sediment remediation technologies such as containment, treatment, and MNR will be effective at reducing risk to protective concentrations. Full removal was evaluated in the FS but was not selected based on short-term effectiveness, implementability, and cost.